

January 9th, 1849.

Mr. ASHMEAD in the Chair.

Letters were read from Dr. B. F. Shumard, dated Louisville, Kentucky, November 20, 1848, and Dr. L. P. Yandell, of same date, severally acknowledging the receipt of their notices of election as Correspondents.

A letter was read from H. Smith, M. D., dated St. James' Place, London, 1st December, 1848, proposing exchanges of Reptilia with the Academy, and transmitting a list of those in his possession. Referred to the Curators.

Prof. H. D. Rogers stated that his views of the formation of mountain ridges by the upheaving of the crust of the earth from subterranean causes, had been amply confirmed in a tour to Europe, which he recently made for that purpose.

Dr. Leidy offered the following observations on the existence of the intermaxillary bone in the embryo of the human subject:

The immortal Goethe, I believe, was the first to point out the existence of the os intermaxillare in the human subject, but it has only been observed in an abnormal condition, or where there has been an arrest of development in connection with some cases of hare-lip; and the period of life in which it is found as a distinct piece, and its exact limits, have not yet been accurately determined. The universality of the presence of the os intermaxillare in all animals below man, its presence as a distinct piece in an abnormal condition in man, always defined by a lateral fissure which characterizes it as the incisive bone, and the uniform existence of a transverse fissure behind the incisive alveoli of the os maxillare superius of the human fœtus at birth, have led many anatomists to suspect its normal and independent existence in the embryotic condition of man at an earlier period than it has been sought for.

As the *negro* in his anatomical characters is not so far removed from the embryological condition as the *white*, it is to be presumed that the intermaxillary bone would remain longer distinct; and under such an impression I have several times desired medical students, from our Southern States, whose opportunities of investigating the anatomy of the negro are frequent, to make this a subject of inquiry. Such an opinion cannot be considered unworthy of attention, when it is recollected that Tschudi mentions the existence of a true os interparietale, as a constant condition, in certain branches of the aboriginal inhabitants of Peru, the Chinchas, Aymaras and Huancas.

Recently having had an opportunity of examining several human embryos, in one of them I was fortunate enough to detect the intermaxillary bone as a distinct and independent piece. This embryo measured one inch and eleven lines from heel to vertex, and I presumed it to be about nine or ten weeks old. In it ossification had already advanced in the superior maxillary and inter-

maxillary bones sufficiently to give them a determinate form, and their appearance, when magnified, is represented in the figures 1 and 2, which were taken from the specimens through the aid of the camera lucida.

Fig. 1.

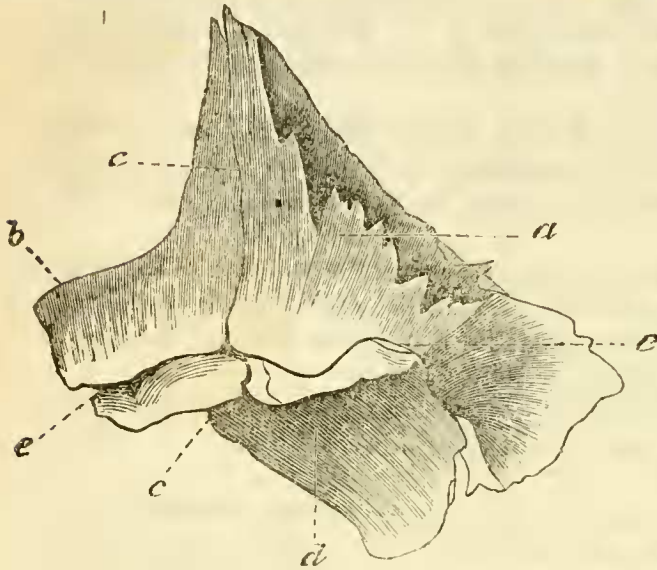


Fig. 2.

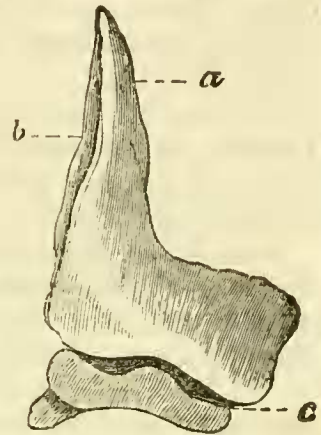


Fig. 1 represents the superior maxillary and intermaxillary bones, much magnified, of a human embryo. The drawing was taken from the right side through the aid of the camera lucida, which reverses its position. *a.* superior maxillary bone; *b.* intermaxillary bone; *c.* line of articulation between the two bones; *d.* palatine process; *e.* alveolar groove.

Fig. 2 represents the antero-inferior surface of the separated intermaxillary bone, much magnified. (From the left side, but reversed by the camera.) *a.* ascending or nasal process; *b.* articulating surface for the superior maxillary bone; *c.* incisor alveoli.

The greatest breadth of the two bones in apposition is one line and two-thirds; the greatest height, being at the ascending or nasal process, is one line. The two pieces present a facial portion, consisting of the ascending or nasal process and part of the body of the bones; an alveolar ridge and groove and a palatine process projecting backward from the superior maxillary bone. They are easily separable at this period, and the articulation passes through the alveolar ridge, at a point corresponding to the separation between the incisor alveoli and the canine alveolus, and extends transversely inwards behind the incisor alveoli, and vertically upwards, dividing the nasal process into two nearly equal portions. On the posterior surface of the nasal process the articulation is at the bottom of a comparatively deep and wide groove, which, however, does not appear to be part of the lachrymal canal, as the latter appears afterwards and external to the former groove. The preparations exhibiting these interesting points which prove the existence of the same law, throughout the animal kingdom, governing the formation of the upper maxillary bones, I present for the inspection of the members of the Academy.

In an embryonic skeleton in the Wistar Museum, measuring three and one

eighth inches in length, and purporting to be about nine weeks old, which, however, I think too young, the maxillo-intermaxillary articulation is still evident at the ascending process, but it does not divide the latter so equally, being more internal and inferior, apparently from a more rapid development of the nasal process of the true maxillary bone. Just above the alveolar ridge they are already anchylosed together.

In another embryo, in the same museum, measuring three and one-fourth inches in length, the two bones have become firmly united, excepting behind the incisor alveoli, but the line of original separation is readily traced out, from a greater degree of thinness and transparency along its course. The nasal process of the true maxillary bone has so much increased beyond the nasal process of the intermaxillary bone, that the latter no more ascends to the summit of the former, but is considerably inferior and internal.

In the fœtal skeleton, measuring five inches in length, all traces of the inter-articulation have disappeared, except behind the incisor alveoli, which latter portion, as is well known, does not usually disappear until some time after birth, and in some instances is found in the adult cranium.

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*January 23d, 1849.*

Mr. PHILLIPS in the Chair.

A letter was read from the Baroness Berzelius, dated Stockholm, September 15, 1848, announcing to the Academy the decease of her late husband, the Baron Berzelius, a Correspondent of this Institution.

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*January 30th, 1849.*

Dr. BRIDGES in the Chair.

The Auditors reported that they had examined the account of the Treasurer for 1848, and had found it correct.

The Monthly Report of the Corresponding Secretary was read and adopted.

The resolution offered by Dr. Leidy, at the last meeting for business, was then taken up, that the following Article of the By-Laws be amended:

“*Chap. 6th, Art. 1.* There shall be seven standing committees, viz.—the Auditors, to consist of three members; the Mineralogical and Geological Committee, and the Zoological Committee, to consist of seven members each; the Publication, Library and Botanical Committees, and the Committee on Physics, to consist every one of five members, whose term of service shall be one year. And all these, except the Auditors and Publication Committee, shall be elected at the last meeting of January in each year.”

So as to read thus:

“There shall be *fifteen* Standing Committees, viz.: 1. The *Ethnological* Committee; 2, the Committee on Comparative *Anatomy and*